



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,815	06/15/2000	Stephen McRobert	50100-754	9322

7590 06/01/2004
McDermott Will & Emery
600 13th Street NW
Washington, DC 20005-3096

EXAMINER

WILSON, ROBERT W

ART UNIT	PAPER NUMBER
----------	--------------

2661

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/593,815

Applicant(s)

MCROBERT, STEPHEN

Examiner

Robert W Wilson

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-9 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Art Unit: 2661

DETAILED ACTION

1.0 Upon reconsideration the examiner determined that applicant's claimed invention reads on ARP reply or match signal between switches or nodes in a TCP/IP network which are interconnected via an Ethernet or expansion bus; consequently, upon further search the following new rejection applies. The finality of the previous office action has been withdrawn in view of the discovery of the new prior art.

2.0 The application of Stephen McRobert entitled "MATCH SIGNALS IN DATA SWITCHING SYSTEM INCLUDING MULTIPLE SWITCHING DEVICES" filed on 6/15/2000 and amended on 2/6/04 & 5/10/04 which claims priority based on 60/1'52,949 dated 09/09/1999 was examined. Claims 2-9 & 11-15 are pending.

Claim Rejections - 35 USC § 103

3.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4.0 **Claims 2-9 & 11-15** rejected under 35 U.S.C. 103(a) as being unpatentable over Kapadia et. al. (U.S. Patent No.: 6,128,294)

Referring to **Claim 2**, Kapadia (U.S. Patent No.: 6,128,294) teaches: A data communication system (Fig 12) comprising:

Multiple switching devices for switching data packets (16a-16b per Fig 12), and

An expansion bus for transferring the data packets between the switching devices (Ethernet per col. 1 line 62 or col. 3 lines 6-15 and per Fig 12 or expansion bus)

Each switching device having an address processing block for comparing destination address information of a received data packet with current address information (16a-16b have a TCP/IP address and Ethernet MAC address. The destination in the ARP broadcast is compared to the TCP/IP address of 16a-16b and if the address matches then an ARP reply is generated as shown in Figs 12 & 13 or col. 19 lines 35-54)

Art Unit: 2661

And producing a match signal supplied to another switching device when the destination address matches the current information (When the ARP broadcast message destination address is the same as the address of 16a for example, a reply is created or signal match per Figs 12 & 13 or col. 19 lines 35-54)

Wherein the match signal informs said another switching device that the destination address information that causes the match signal is associated with the switching device that generates the match signal (When the ARP broadcast message is the same as the IP address of 16a for example, a reply is created or signal match is sent back to the device that sent the ARP broadcast per Figs 12 & 13 or col. 19 lines 35-54)

Kapadia does not expressly call for: a match signal but teaches reply to an ARP broadcast per col. 19 lines 35-54.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the reply to the ARP performs the same function as the signal match.

Referring to **Claim 11**, Kapadia (U.S. Patent No.: 6,128,294) teaches: In a data switching system (Fig 12) having multiple switching devices (16a-16b per Fig 12)

Comparing destination address information to a received data packet with the first current address information matches the first current address information (ARP broadcast message is sent to all of the nodes. Each node determines whether the ARP broadcast destination matches their individual address. If the destination address matches then a reply is sent back or signal match to the node that sent the ARP broadcast per Figs 12 & 13 or col. 19 lines 35-54)

Wherein the match signal informs the second switching device that the destination address information that causes the match signal is associated with the first switching device that generates the match signal (An ARP broadcast message is sent to all of the nodes. Each node determines whether the ARP broadcast destination matches their individual address if there is a match then a reply is sent back or signal match to the node that sent the ARP broadcast per Figs 12 & 13 or col. 19 lines 35-54)

Kapadia does not expressly call for: a match signal but teaches reply to an ARP broadcast per col. 19 lines 35-54.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the reply to the ARP performs the same function as the signal match.

In Addition Kapadia teaches:

Regarding **Claim 3**, wherein the address processing block is configured for producing a forwarding control signal for forwarding g the received data packet to a destination associated with the destination address information (The reply signal in response to the ARP broadcast

Art Unit: 2661

contains the address so that the replying device address can be stored in a table so that a packet can be sent to the ARP replying node per Fig 12 & 13 or col. 19 lines 35-54)

Regarding **Claim 4**, wherein the address processing block is configured for comparing address information of the received data packet with the current address information to update the current address information in accordance with the source information if the source address information does not match the current address information (Nodes in which the destination address of the ARP broadcast compare their addresses with the destination address and update their routing tables with the address of the ARP broadcasting node per Fig 12 & 13 or col. 19 lines 35-54)

Regarding **Claim 5**, wherein the address processing block of said another switching device is responsible to the match signal for updating the current address information in accordance with the destination address information that causes the match signal (The ARP Broadcasting node receives a Reply with the destination address and updates its table per Fig 12 & 13 or col. 19 lines 35-54)

Regarding **Claim 6**, wherein each switching device comprises a match pin connected to the match pin of said another switching device to transfer the match signal (It would have been obvious to one of ordinary skill in the art at the time of the invention that the pin outs match in the Ethernet cable between the End Switch devices as shown in Fig 12 on which the reply to the ARP broadcast is sent or match pin connected to match pin in order for the invention to work)

Regarding **Claim 7**, wherein the match signal is transferred via expansion bus (The Reply to the ARP broadcast is sent via Ethernet between End Switch devices per Fig 12 or expansion bus)

Regarding **Claim 8**, wherein the address processing block is configured for processing the source and destination address information of data packets received from the expansion bus (The End switches process source and destination address in order for the ARP function to work per Figs 12 & 13)

Regarding **Claim 9**, wherein the address processing block of a switching device is further configured for processing the source and destination address information of data packets received from network stations connected to the switching device (All of the End switches process ARP broadcast source and destination address packets per Figs 12-13 or col. 19 lines 35-54)

Regarding **Claim 12**, wherein the second switching device stores second current information updateable in response to the match signal in accordance with the destination address information that causes the match signal (The ARP Broadcasting device receives a reply which has the destination address of the ARP replying device per Figs 12-13 or col. 19 lines 35-54)

Regarding **Claim 13**, further comprising the step of comparing source address information of the received data packet with the first current information to update the first current information in accordance with the source address information if the source address information does not match

Art Unit: 2661

the first current information (All nodes receive the ARP request and update their routing tables based upon the destination address of the ARP broadcasting device per Figs 12-13 or col. 19 lines 35-54)

Regarding **Claim 14**, further comprising the step of comparing source address information of the received data packets with the second current information to update the second current information in accordance with the source address information if the source address information does not match the second current information (The ARP Broadcasting device receives a reply which has the destination address of the ARP replying device and updates its table per Figs 12-13 or col. 19 lines 35-54)

Regarding **Claim 15**, wherein the second switching device uses the second current information for making data packet forwarding decision (The ARP broadcasting device receives the reply which has the destination address of the ARP replying device and updates its table with the destination address in order that packets can be sent to the ARP replying device per Figs 12-13 or col. 19 lines 35-54)

Response to Amendment

5.0 Applicant's arguments with respect to **Claims 2-9 & 11-15** have been considered but are moot in view of the new ground(s) of rejection.

The examiner respectively disagrees with the applicant's argument that the new reference Kapadia fails to "supply a match signal that informs another device destination address that causes the match signal is associated with the switching device that generates the match signal" The new reference Kapadia teaches that a device sends an ARP broadcast to determine the destination address of another device. The device whose address matches destination address sends a reply back to the ARP broadcasting device or match signal per Figs 12 & 13 or col. 19 lines 35-54. Kapadia does not expressly call for match signal but teaches a reply per Figs 12-13 or col. 19 lines 35-54. It would have been obvious to one of ordinary skill in the art at the time of the invention that the reply to the ARP performs the same function as the match signal.

Conclusion

6.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

Art Unit: 2661

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Robert W Wilson
Examiner
Art Unit 2661

RWW
May 19, 2004



DAINSTON
RECEPTIONIST